

IN THE CLAIMS

1. (Currently Amended) A method, comprising:

~~for forming an insulating film in a semiconductor device, wherein~~
~~characterized in that a step of forming an~~the insulating film so as to have~~has a~~
~~thickness in the range of 0.3 to 2 nm; and~~

~~and a step of removing impurities from the insulating film are repeated a~~
~~plurality of times, wherein the removing impurities is performed at a temperature~~
~~greater than 500°C, to form an insulating film having a prescribed thickness.~~

2. (Currently Amended) The method for forming ~~an~~the insulating film in
a semiconductor device ~~in~~of claim 1, wherein the ~~step of removing impurities is~~
performed in a reducing gas atmosphere or an oxidizing gas atmosphere.

3. (Currently Amended) The method ~~for forming an insulating film in a~~
~~semiconductor device as in~~of claim 1, wherein the removing impurities a plurality
of times comprises:

~~wherein the step of removing impurities is performed in a~~ first treatment in
a reducing gas atmosphere; and

removing impurities in a second treatment in ~~reducing gas atmosphere~~
~~combined with an oxidizing gas atmosphere.~~

4. (Currently Amended) The method ~~for forming an insulating film in a~~
~~semiconductor device as of in~~ claim 2, wherein the reducing gas atmosphere ~~in the~~
~~step of removing impurities is formed of~~comprises ~~any of single gases of an~~
ammonia gas, a hydrogen gas and an inert gas, a combination comprising at least
one of the foregoing a mixed gas of these gases, or plasma nitrogen, or the
reducing gas atmosphere is formed in a vacuum.

5. (Currently Amended) The method ~~for forming an insulating film in a~~
~~semiconductor device as of in~~ claim 2 ~~or 3~~, wherein the oxidizing gas atmosphere ~~in the~~

~~step of removing impurities is formed of any of single gases of~~comprises an oxygen gas, a nitrogen monoxide gas, a nitrous oxide gas, ~~and an ozone gas, or a combination comprising at least one of the foregoing gases, a mixed gas of these gases or plasma~~ oxygen.

6. (Currently Amended) The method for ~~forming an insulating film in a semiconductor device as in~~of claim 3, wherein the reducing gas atmosphere ~~in the step of removing impurities is formed of any of single gases of~~comprises an ammonia gas, a hydrogen gas, and an inert gas, or a combination comprising at least one of the foregoing a mixed gas of these gases, or plasma nitrogen, or the reducing gas atmosphere is formed in a vacuum.

7. (Currently Amended) The method for ~~forming an insulating film in a semiconductor device as in~~of claim 3, wherein the oxidizing gas atmosphere ~~in the step of removing impurities is formed of any of single gases of~~comprises an oxygen gas, a nitrogen monoxide gas, a nitrous oxide gas, and an ozone gas, or a combination comprising at least one of the foregoing a mixed gas of these gases, or plasma oxygen.

8. (New) A method, comprising:
forming an insulating film in a semiconductor device, wherein the insulating film has a thickness in the range of 0.5 to 2 nm; and
removing impurities from the insulating film a plurality of times to form an insulating film having a prescribed thickness.

9. (New) A method, comprising:
forming an insulating film in a semiconductor device, wherein the insulating film has a thickness in the range of 0.3 to 2 nm; and

removing impurities from the insulating film a plurality of times to form an insulating film having a prescribed thickness, wherein the removing impurities a plurality of times comprises:

removing impurities in a first treatment in a reducing gas atmosphere; and
removing impurities in a second treatment in an oxidizing gas atmosphere.